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ABSTRACT

SELF CONCEPT OF ABILITY AS A LEARNER HAS BEEN SHOWN TO BE A SIGNIFICANT FACTOR IN PUPIL ACHIEVEMENT. THE INDIVIDUALLY PRESCRIBED INSTRUCTION (IPI) SYSTEM WAS EXPECTED TO ENHANCE PUPILS' SELF CONCEPTS OF ABILITY. A QUESTIONNAIRE WAS GIVEN TO SIXTH, SEVENTH, AND EIGHTH GRADE STUDENTS FROM SEVERAL SCHOOLS, ONE OF WHICH USED THE IPI SYSTEM. ANALYSIS OF THE DATA FAILED TO CONFIRM THE HYPOTHESIS THAT STUDENTS TAUGHT BY THE IPI METHOD HAVE STRONGER SELF CONCEPTS OF ABILITY AS LEARNERS. A SAMPLE OF THE QUESTIONNAIRE IS APPENDED. (JY)

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Jan Humphrey
Practicum
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SELF CONCEPT OF ABILITY IN IPI AND NON-IPI STUDENTS

Self concept of ability as a learner has been shown to be a significant factor in pupil achievement.[1] When intelligence as measured by the California Test of Mental Maturity was controlled the correlation between grade point average and self concept of ability score is .42 for boys and .39 for girls.

These results suggest that any instructional system which improves self concept of ability will concurrently affect achievement. The individually prescribed instruction (IPI) system which is in use at the Oakleaf School is expected to enhance pupils' self concepts of ability. Students do not experience failure, as in more typical classrooms, but proceed through the curriculum at their own rate. If students are continually successful at learning, it would not be unreasonable to expect that their self concepts of ability are greater than those of pupils who are accustomed to at least occasional failure.

Specifically, the hypothesis tested in this study is that students from the Oakleaf School have higher self concepts of ability than do students in other (non-IPI) schools.

Method

A pencil and paper questionnaire was given to 791 sixth, seventh and eighth grade students from Wallace Jr. High School. Only sixth and seventh grade students for whom complete

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1. Brookover, Wilbur B., Ann Paterson, and Shailer Thomas, Final Report of Cooperative Research Project No. 845, The Relationship of Self-Images to Achievement in Junior High School Subjects (East Lansing, Michigan, 1962).

data were available were included in the analysis of data on general self concept of ability, making a total of 352 subjects. These students were from Oakleaf, Rolling Hills, McGibney, Skyline, and Wallace Schools.

The questionnaire was adapted and abbreviated from that developed by Brookover, et al and is reproduced in Appendix A. It consists of seven scales and several specific subject liking items. The scales and the number of items devoted to each are given in Table 1.

SCALE	# ITEMS
General self concept	7
Importance of grades	8
Approval	3
Self concept - mathematics	8
Self concept - reading	8
Self concept - social studies	8
Self concept - science	8
Subject liking	7

TABLE 1

Scores on each of the seven scales were computed by summing the scores for each item. In an item with five alternatives, scores ranged from 1 to 5, the response indicating the highest self concept being given a score of 5. Items with four alternatives were given a score of from 1 to 4.

Brookover gives the reliability of the general self concept scale as .82 for males and .77 for females, using Hoyt's internal consistency reliability measure.

Results and Discussion

Means for each of the subgroups are given in Tables 2 and 3.

	MALES		FEMALES	
	6th (N = 16)	7th (N = 10)	6th (N = 11)	7th (N = 11)
Gen S C	25.44	24.60	26.45	20.18
I G	25.63	26.90	28.45	24.91
App	9.56	9.00	10.36	9.36
S C - M	30.31	29.20	30.45	19.73
S C - R	28.25	28.50	32.55	27.82
S C - SS	29.88[2]	29.00[2]	31.09[2]	28.00[2]
S C - S	27.50	31.70	29.18	24.27

TABLE 2: IPI STUDENTS, MEANS

	MALES		FEMALES	
	6th (N = 61)	7th (N = 96)	6th (N = 76)	7th (N = 71)
Gen S C	24.31	23.91	24.11	23.04
I G	26.30	26.18	26.92	25.41
App	9.31	8.88	9.96	9.34
S C - M	28.30	27.77	28.21	26.08
S C - R	26.90	27.60	29.26	28.77
S C - SS	28.16	28.31	28.67	28.77
S C - S	29.08	27.90	26.05	27.20

TABLE 3. NON-IPI STUDENTS, MEANS

Comparison between these data and Brookover's data (Table 4) for the seventh grade, shows that Brookover's subjects had higher general self concepts of ability than either the IPI or non-IPI

2. Social studies is not taught in the IPI method at Oakleaf.

students in this study. Specific subject self concepts were higher for the males in this study than for Brookover's male subjects.

	MALES	FEMALES
	N = 513	N = 537
Gen S C	27.35	28.25
S C - M	26.97	27.47
S C - R	25.45	28.17
S C - SS	25.63	26.58
S C - S	27.18	27.73

TABLE 4. BROOKOVER'S 7th GRADE STUDENTS, MEANS

Values for "t" were computed for all within school (across grade) and between school (within grade) comparisons for males and females separately. These values and significance levels are given in Tables 5 and 6.

It is important to note, first of all, that the only significant differences found involve female subjects. Of the ten significant values of "t," eight are found between sixth and seventh grade females. In each of these eight cases, self concept is higher in the sixth than in the seventh grade. Perhaps these results can be explained by the fact that females have a difficult social adjustment to make in the seventh grade which is manifested in a drop in the self concept of ability.

Little importance should be attached to the two other significant comparisons. Note, however, that the direction of the difference is opposite to the prediction.

	MALES		FEMALES	
	IPI 6th vs. IPI 7th (df = 24)	NON-IPI 6th vs. NON-IPI 7th (df = 155)	IPI 6th vs. IPI 7th (df = 20)	NON-IPI 6th vs. NON-IPI 7th (df = 145)
Gen S C	.57	.66	4.13	1.60
I G	1.13	.20	2.22*	2.70**
App	.60	1.39	1.35	2.10*
S C - M	.51	.46	4.49	1.98*
S C - R	.10	.82	2.24*	.52
S C - SS	.36	.17	1.47	.11
S C - S	1.56	1.21	2.34*	1.20

* significant at $p < .05$

** significant at $p < .01$

significant at $p < .001$

TABLE 5. VALUES OF t, WITHIN SCHOOL COMPARISONS

	MALES		FEMALES	
	IPI 6th vs. NON-IPI 6th (df = 75)	IPI 7th vs. NON-IPI 7th (df = 104)	IPI 6th vs. NON-IPI 6th (df = 85)	IPI 7th vs. NON-IPI 7th (df = 80)
Gen S C	1.16	.53	1.68	2.50*
I G	.82	.56	1.45	.43
App	.51	.18	.73	.04
S C - M	1.20	.59	1.08	3.10**
S C - R	.92	.49	1.75	.55
S C - SS	1.12	.37	1.28	.49
S C - S	.93	1.92	1.74	1.56

* significant at p .05

** significant at p .01

TABLE 6. VALUES OF t, BETWEEN SCHOOL COMPARISONS

The hypothesis that students taught by the IPI method have stronger self concepts of ability as learners than students in regular classrooms has failed to be confirmed. It appears that females from the IPI project suffer decreases in self concept of ability when they advance to a non-IPI school in the seventh grade.

APPENDIX A:

THE QUESTIONNAIRE

Learning Research and Development Center

University of Pittsburgh

Junior High School Study

The Learning Research and Development Center of the University of Pittsburgh is doing a study to find out what junior high school students think about themselves, their school work, and their future plans. Please read the directions carefully on each part of the questionnair before you answer. If you have any questions, raise your hand and someone will help you.

Your answers will not be shown to your teachers or anyone else, and will in no way affect your grades. No one will see the answers you give except the research staff of the Leraning Research and Development Center.

PLEASE FILL IN THE FOLLOWING INFORMATION

Name

Birth date

Sex

What school did you attend last year?

Directions: Circle the letter in front of the statement which best answers each question.

1. How do you rate yourself in school ability compared with your close friends?

   a. I am the best
   b. I am above average
   c. I am average
   d. I am below average
   e. I am the poorest

2. How do you rate yourself in school ability compared with those in your class at school?

   a. I am the best
   b. I am above average
   c. I am average
   d. I am below average
   e. I am among the poorest

3. Where do you think you would rank in your class in high school?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

4. Do you think you have the ability to complete college?

   a. yes, definitely
   b. yes, probably
   c. not sure either way
   d. probably not
   e. no

5. Where do you think you would rank in your class in college?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

6. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?

   a. very likely
   b. somewhat likely
   c. not sure either way
   d. unlikely
   e. most unlikely

7. Forget for a moment how others grade your work. In your own opinion how good do you think your work is?

   a. my work is excellent
   b. my work is good
   c. my work is average
   d. my work is below average
   e. my work is much below average

8. What kind of grades do you think you are capable of getting?

   a. mostly A's
   b. mostly B's
   c. mostly C's
   d. mostly D's
   e. mostly F's

9. How important to you are the grades you get in school?

   a. very important
   b. important
   c. not particularly important
   d. grades don't matter to me at all

10. How important is it to you to be high in your class in grades?

   a. very important
   b. important
   c. not particularly important
   d. doesn't matter to me at all

11. How do you feel if you don't do as well in school as you know you can?

   a. feel very badly
   b. feel badly
   c. don't feel particularly bad
   d. doesn't bother me at all

12. How important is it to you to do better than others in school?

   a. very important
   b. important
   c. not particularly important
   d. doesn't matter to me at all

13. Which statement best describes you?

   a. I like to get better grades than every one else.
   b. I like to get better grades than almost everyone else.
   c. I like to get about the same grades as everyone else.
   d. I don't care about any particular grades.

14. In your schoolword do you try to do better than others?

    a. all of the time
    b. most of the time
    c. occasionally
    d. never

15. How important to you are <u>good</u> grades compared with other aspects of school?

    a. good grades are the most important thing in school
    b. good grades are among the important things in school
    c. some other things in school are more important
    d. good grades don't matter to me at all

16. How do you feel when your teachers do not approve of your school work?

    a. feel very badly
    b. feel badly
    c. don't feel particularly bad
    d. doesn't bother me at all

17. How important to you is it to have other students in your class approve of your work?

    a. very important
    b. important
    c. not particularly important
    d. doesn't matter to me at all

18. How important is it to have your close friends approve of your work?

    a. very important
    b. important
    c. not particularly important
    d. doesn't matter to me at all

Now we would like you to again answer some of the same questions, but this time about four different subjects which you are now taking or have taken in the past.

Directions: Put an "X" in the box under the heading which best answers the question. Answer for all four subjects. (You will have one "X" on each line.)

1. How do you rate your ability in the following school subjects compared with your close friends?

	I am the poorest	I am below average	I am average	I am above average	I am the best
Mathematics	☐	☐	☐	☐	☐
English (Reading)	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐

2. How do you rate your ability in the following school subjects compared with those in your class at school?

	I am among the poorest	I am below average	I am average	I am above average	I am among the best
Mathematics	☐	☐	☐	☐	☐
English (Reading)	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐

3. Where do you think you would rank in your high school graduating class in the following subjects?

	among the poorest	below average	average	above average	among the best
Mathematics					
English (Reading)					
Social Studies					
Science					

4. Do you think you have the ability to do college work in the following subjects?

	no	probably not	not sure either way	yes, probably	yes, definitely
Mathematics					
English (Reading)					
Social Studies					
Science					

5. Where do you think you would rank in your college class in the following subjects?

	among the poorest	below average	average	above average	among the best
Mathematics	☐	☐	☐	☐	☐
English (Reading)	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐

6. How likely do you think it is that you could complete advanced work beyond college in the following subjects?

	most unlikely	unlikely	not sure either way	somewhat likely	very likely
Mathematics	☐	☐	☐	☐	☐
English (Reading)	☐	☐	☐	☐	☐
Social Studies	☐	☐	☐	☐	☐
Science	☐	☐	☐	☐	☐

7. Forget for a moment how others grade your work. In your own opinion how good do you think your work is in the following school subjects?

	my work is much below average	my work is below average	my work is average	my work is good	my work is excellent
Mathematics					
English (Reading)					
Social Studies					
Science					

8. What kind of grades do you think you are capaple of getting in the following subjects?

	mostly E's	mostly D's	mostly C's	mostly B's	mostly A's
Mathematics					
English (Reading)					
Social Studies					
Science					

Directions: Circle the letter in front of the statement which best answers each question.

1. How do you like seventh grade compared with sixth grade?

   a. I like seventh grade better
   b. I liked sixth grade better
   c. I like seventh grade about the same as sixth

2. How do you like mathematics this year as compared with last year?

   a. I like math better this year
   b. I liked math better last year
   c. I like math about the same as last year
   d. I didn't take math both years

3. How do you like English (Reading) this year as compared with last year?

   a. I like English (Reading) better this year
   b. I liked English (Reading) better last year
   c. I like English (Reading) about the same as last year
   d. I didn't take English (Reading) both years

4. How do you like social studies this year as compared with last year?

   a. I like social studies better this year
   b. I liked social studies better last year
   c. I like social studies about the same as last year
   d. I didn't take social studies both years

5. How do you like science this year as compared with last year?

   a. I like science better this year
   b. I liked science better last year
   c. I like science about the same as last year
   d. I didn't take science both years

6. Which of the following subjects do you LIKE BEST?

   a. mathematics
   b. English (Reading)
   c. social studies
   d. science

7. Which of the following subjects do you LIKE LEAST?

   a. mathematics
   b. English (Reading)
   c. social studies
   d. science